

CLAIMS

1. An electromagnet core made of a soft magnetic material and including a coil, wherein the electromagnet core is formed with a soft magnetic powder and a binder for the soft magnetic powder, and the binder is made of a polyimide resin.

2. The electromagnet core according to Claim 1, wherein a volume ratio of the polyimide resin to the soft magnetic powder is in a range of from 0.05 wt% to 1.0 wt%.

3. The electromagnet core according to Claim 1 or 2, wherein the electromagnet core is used for a measuring valve control electromagnet used for a liquid fuel injector.

4. A method of manufacturing an electromagnet core made of a soft magnetic material and including a coil, the method comprising steps of:

inserting a mixture of soft magnetic powder and a binder made of a polyimide resin into a molding frame;

molding the mixture by using a pressing process, wherein a lubricant layer is formed on a surface of a receiving portion of the molding frame for receiving the mixture.

5. The method according to Claim 4,
wherein the receiving portion is heated from a room
temperature to a high temperature, and
wherein, before the mixture is inserted, the surface
of the receiving portion is coated with a lubricant
solution, and a moisture in the coated lubricant solution
is vaporized by using a heat of the receiving portion,
thereby forming the lubricant layer.

6. The method according to Claim 5, wherein a flow
initiating material is added to the mixture.